
Chino Landscape Restoration Proposed Treatments

Purpose and Need

The Forest Service is proposing a series of actions to restore and maintain soil and watershed function, vegetation conditions, riparian and groundwater dependent systems, and natural fire regime. The goal is to move the landscape toward desired conditions described in the 2015 Land and Resource Management Plan for the Prescott National Forest (hereinafter referred to as the Forest Plan) and improve wildlife habitat for pronghorn antelope, migratory birds, native fish, and federally listed or regionally sensitive species.

Treatments will include vegetation thinning, prescribed burning, and fuels reduction. Other actions include erosion control and impact mitigation for forest system roads, unauthorized routes, and unmanaged recreation use. The expectation is an improvement in ecological function and an increased diversity in the structure and composition of the vegetation. Benefits would include increased soil moisture, reduced soil movement, and improved water quality. The treatments are also expected to increase the resilience of the ecosystem to respond to expected changes imposed by future climate trends.

Key to the implementation of this project is the Central Arizona Grasslands Conservation Strategy (CAGCS). As noted in the charter of the CAGCS (Arizona Game and Fish Department, 2014), the Prescott NF is operating under the regionally-directed “Central Priority”. This direction emphasizes the restoration of fire-adapted ecosystems, of which grasslands are a major component.

Project Area

Departure from the desired vegetation structure and fire regime in the project area has led to a decline in the quality of wildlife habitat and the functionality of the watersheds. Current conditions, shaped by drought and a lack of fire, include encroachment by trees and shrubs into the grasslands, loss of perennial grass cover, and an increase in exposed soil surface.

The project area encompasses approximately 484,000 acres in the northern part of the Prescott National Forest (Prescott NF), and includes grasslands, chaparral, piñon-juniper, and ponderosa pine vegetation types. It spans two ranger districts, with the majority of the area (approximately 481,200 acres) on the Chino Valley Ranger District and the remainder (approximately 2,800 acres) on the Verde District.

The project area spans both sides of the Forest; on the east side it includes most of the forest north of the Woodchute Wilderness Area, on the west it runs from the southern boundary of the Chino Valley District north to the watershed boundary above Juniper Mesa Wilderness. It includes the Apache Creek and Juniper Mesa Wilderness Areas, their adjacent recommended wilderness areas, the Sycamore Canyon recommended wilderness area, and a Wild and Scenic River eligible segment of the upper Verde River. Please refer to the Chino Landscape Project Map for details.

The Prescott NF manages about 425,000 acres within the project area. Preliminary analysis has identified areas where the watershed and vegetation conditions could be improved or maintained with treatment. These areas have been classified according to their priority for treatment, as described below:

Tier 1 – primary priority for treatment; it is expected that these areas would provide the best ecological response to the proposed treatments and the greatest chance of successfully trending toward the desired conditions.

Tier 2 – secondary priority for treatment; these areas would be included in treatments for Tier 1 areas to create logical treatment blocks. These areas tend to more closely resemble the desired conditions; treatments in Tier 2 areas will generally maintain these conditions.

Tier 3 – special consideration needed for treatment; this classification includes sensitive areas that may contain highly erodible or easily compactable soil, habitat for federally listed or regionally sensitive species, or management restrictions related to special designations such as wilderness, wild and scenic river eligibility, or inventoried roadless areas.

Tier 4 – no active treatments; these are areas where it is expected that treatments would not improve the current rate or direction of the trend toward the desired conditions.

Table 1. Acres by PNVT (approximate)

PNVT	Tier 1 Acres	Tier 2 Acres	Tier 3 Acres	Tier 4 Acres	Total Acres
SD & GB Grassland	14,400	13,700	100	100	28,300
Interior Chaparral	5,500	800	3,600	4,700	14,600
Juniper Grassland	48,200	33,500	700		82,400
PJ-Evergreen Shrub	51,600	145,100	27,400	22,900	247,000
PJ-Woodland	4,000	8,300	1,000	4,000	17,300
Ponderosa Pine	22,300		12,300		34,600
Grand Total	146,000	201,400	45,100	31,700	424,200

Vegetation Types

Semi-Desert and Great Basin Grasslands

The Semi-Desert Grassland PNVT ranges from 3,000 to 4,500 feet in elevation. Within the project area, these grasslands are bounded by the Piñon-Juniper Woodlands or Interior Chaparral PNVTs at higher elevations. The Great Basin Grassland PNVT is higher in elevation (approximately 4,700 to 7,600 feet) and climatically cooler and moister than the Semi-Desert Grassland PNVT. The grassland PNVTs are characterized as being dominated by perennial herbaceous species and forbs with less than 10 percent tree cover. Species composition and dominance varies based on soils and topography. Fire historically

occurred every 10 to 30 years in the Great Basin Grassland PNV and 2 to 10 years in the Semi-Desert Grassland PNV. The Desired Conditions for Grasslands can be found in DC-Veg-21 in the Forest Plan.

Interior Chaparral

Interior chaparral occurs at mid-elevations (3,400 to 6,600 feet) on foothills and lower mountain slopes, bordered by ponderosa pine or piñon-juniper woodlands at the upper elevations and semi-desert grasslands at the lower elevations. It has a uniform dense structure dominated by shrubs with thick, stiff, waxy evergreen leaves; grasses are a minor component. These shrub species are usually well adapted to fire, and reproduce prolifically from heat scarified seed or sprout vigorously from enlarged root crowns. Closed-canopy conditions are usually achieved in 6 to 7 years post-fire. The Desired Conditions for Interior Chaparral can be found in DC-Veg-11 and DC-Veg-12 in the Forest Plan.

Juniper Grassland

The Juniper Grassland PNV consists of a grass and forb dominated understory with scattered overstory trees. It generally occurs on flats, basins, gentle sloping foothills, and transitional valleys and is usually associated with deep and productive soils. The Desired Conditions for Juniper Grassland can be found in DC-Veg-6 in the Forest Plan.

Piñon-Juniper Evergreen Shrub

The Piñon-Juniper PNVTs are cold adapted evergreen woodlands characterized by piñon and/or juniper species at elevations ranging from 4,500 to 7,500 feet. The Piñon-Juniper Evergreen Shrub PNV has an understory dominated by a mix of shrub species and generally occurs on elevated and lowland plains, hills, and lower mountain slopes. The soils associated with this PNV are variable and include those derived from granite, limestone, basalt, sandstone, and alluvium. The Desired Conditions for Piñon-Juniper Evergreen Shrub can be found in DC-Veg-7 and DC-Veg-8 in the Forest Plan.

Piñon-Juniper Woodland

The Piñon-Juniper Woodland PNV has a persistent tree overstory and a discontinuous understory of grasses and/or shrubs. It generally occurs on flats, ridgetops, rugged uplands, and steep slopes at various elevations, and on soils that are shallow and rocky. The Desired Conditions for Piñon-Juniper Evergreen Shrub can be found in DC-Veg-9 and DC-Veg-10 in the Forest Plan.

Ponderosa Pine-Evergreen Oak

The Ponderosa Pine-Evergreen Oak PNV ranges in elevation from approximately 6,000 to 7,500 feet. It is dominated by ponderosa pine and can be distinguished from the Ponderosa Pine-Gambel Oak PNV by one or more well represented evergreen oak species (e.g., Emory oak and Arizona white oak), juniper species, piñon pine species, and in some locations, Arizona cypress. These forests have an understory of primarily evergreen shrubs. The Desired Conditions for Ponderosa Pine-Evergreen Oak can be found in DC-Veg-13 through DC-Veg-16 in the Forest Plan.

Ponderosa Pine-Gambel Oak

The Ponderosa Pine-Evergreen Oak PNVT ranges in elevation from approximately 6,500 to 9,000 feet on hills, mountain slopes, and some elevated plains. These forests are dominated by ponderosa pine and Gambel oak and commonly include other tree species such as New Mexico locust, juniper, and piñon. There is typically an understory of grasses and forbs with occasional shrubs. The Desired Conditions for Ponderosa Pine-Evergreen Oak can be found in DC-Veg-17 through DC-Veg-20 in the Forest Plan.

Proposed Treatments

Semi-Desert and Great Basin Grasslands

There are about 28,100 acres of grassland PNVT within the project area that would be the priority for treatment (Tiers 1 and 2). Treatments would consist primarily of prescribed fire and hand-thinning. Prescribed fires are implemented under specified environmental conditions that allow the fire to be confined to a predetermined area. Broadcast burning will be the primary treatment in this vegetation type and pile burning may be used if slash removal is desired.

The Great Basin Grassland PNVT intermingles with the Piñon-Juniper PNVTs and is subject to encroachment by trees and shrubs. Treatments to address this encroachment would be accomplished by hand with chain saws to thin vegetation within the area to the prescribed spacing or density. The resulting debris would be scattered or piled, and prescribed burning (broadcast or pile burning) may be used as a follow-up treatment.

Interior Chaparral

Within the project area, there are approximately 5,500 acres of Interior Chaparral PNVT that have been identified for first priority treatment (Tier 1). Pending additional analysis, some of the 3,600 acres of Tier 3 may also be included in the first priority for treatment, with appropriate restrictions. The primary treatment in this vegetation type will be prescribed fire, although mastication will be considered as an option. Mastication entails crushing, cutting or mulching the existing vegetation and positioning the cut material within 12" of the ground. It is generally accomplished with a rubber-tired or tracked vehicle using a power cutting head, or a dozer pulling a heavy toothed drum.

Juniper Grassland

The Juniper Grassland PNVT contains about 48,200 acres identified as first priority for treatment (Tier 1). These treatments would include a mixture of prescribed burning and thinning. The thinning could be accomplished either by hand with chain saws or using specialized heavy equipment (mechanized thinning). As with the Semi-Desert and Great Basin grassland treatments, the remaining debris, if not collected for biomass utilization, would be scattered or piled, and prescribed burning (broadcast or pile burning) may be used as a follow-up treatment.

Piñon-Juniper Evergreen Shrub and Piñon-Juniper Woodland

When combined, the Tier 1 acreage of these two PNVTs is about 55,600 acres. As noted above, some of the Tier 3 acreage (28,400 acres, combined) may also be included in the first priority for treatment, with appropriate restrictions. Potential treatments within this area could include prescribed burning, hand and mechanized thinning, mastication, and personal or commercial fuelwood sales. The use of specific treatments will be dictated by the current conditions on-site, the desired outcomes, and the treatment feasibility within the treatment unit. Where late seral or old growth components occur within the piñon-juniper woodland PNV, proposed treatments would primarily be designed to retain or enhance these characteristics.

Ponderosa Pine-Evergreen Oak and Ponderosa Pine-Gambel Oak

The ponderosa pine PNVs cover about 34,600 acres of the project area with about 22,300 acres in the first priority for treatment (Tier 1). Treatments will include mechanized thinning (commercial and pre-commercial), hand thinning, and prescribed burning. Harvest and thinning areas will be limited by access, soil, slope, and suitable vegetation. Prescriptions and treatment objectives would focus on restoring the composition, structure, and natural processes of frequent fire ponderosa pine forest which in turn would improve the quality of goshawk habitat in those areas. The removal of trees would be a by-product of implementing the treatments, not the objective. Slash resulting from thinning activities may be scattered and left on site, burned, or removed as a biomass product.

Transportation and Recreation

The project will include changes to the road and trail system to improve watershed and wildlife habitat conditions. These changes will include road closures (in whole and in part), road access restrictions (seasonally and year-round), and road decommissioning (in whole and in part).

Road closure involves lowering its maintenance level to ML 1. These roads still exist on the ground but vehicular access is prohibited, except when the road is reopened temporarily for an administrative use. Restriction to Authorized Users (RAU) would close the road for public use and remove it from the MVUM. Access would still be allowed for authorized users including Forest Service personnel and permittees. Decommissioned roads have some type of physical closure at their entrance (berm, etc.), or they may be completely obliterated.

No permanent roads would be constructed to implement the vegetation management treatments described above, however, temporary roads would be used during implementation of the treatments. They would then be closed and revegetated after project implementation is complete in each different geographic area.

Unmanaged recreation use within the project areas will also be addressed in areas where it is negatively impacting forest resources such as soil and watershed function, heritage sites, and critical wildlife habitat. Possible focus areas include Camp Wood, Bear Siding, and the Perkinsville Bridge area on the Verde River. Treatments would be implemented with the intent to improve watershed conditions and would not necessarily improve or expand recreation opportunities.

Proposed to Mitigate

Road Number	Miles	Notes
172	4.37	Seasonal restrictions (weather / wet soils)
175A	3.24	Seasonal restrictions (weather / wet soils)
930	0.47	Seasonal restrictions (weather / wet soils)
9088L	0.38	Seasonal restrictions (weather / wet soils)
9095S	0.41	Seasonal restrictions (weather / wet soils)

Proposed to Close and Restrict to Authorized Users (RAU)

Road Number	Miles	Road Number	Miles
156	1.99	9110H	2.00
174D	0.40	9111S	1.30
174E	0.2	9113K	1.20
601	1.15	9114L	0.62
680A	0.60	9129J	0.38
9000V	1.92	9129K	0.81
9002F	1.90	9817C	0.30
9004G	1.02	9825B	0.62
9004L	1.60	9899B	1.11
9005T	0.12	9899X	1.15
9005U	0.80	9900L	0.32
9024B	0.69	9901J	0.43

Proposed to Close and RAU Portion of Road

Road Number	Miles	Notes
9000L	0.46	RAU after stock tank, before SMZ

Proposed to Decommission

Road Number	Miles	Road Number	Miles
95B	4.96	9048T	0.40
95H	0.26	9062L	0.48
604	2.15	9065D	0.75
638A	0.60	9114V	1.03
930A	0.31	9814B	1.81
9003D	1.35	9817C	0.06
9004E	0.96	9819C	0.96
9005B	1.53	9840A	1.03
9010K	0.20	9865B	0.31
9011C	0.22	9869B	0.19
9013P	1.33	9875A	0.61
9017P	0.54	9875B	1.08
9021V	0.30	9875C	0.54
9024C	0.17		

Proposed to Decommission Portion of Road

Road Number	Miles	Notes
174	TBD	Decommission from stock tank south to seep.NO ACTION north to seep.
174A	1.43	Maintenance Level 2 to FR174C, RAU to end of road, decommission after trick tank.
9000L	0.46	Decommission past trick tank, at split w/ 9000M
9000P		Decommission east of trick tank, RAU to intersection with FR9710P
9005X	0.87	Decommission between FR186A & FR9060J
9057A	0.59	Decommission section that runs south to lower road.
9057B	0.08	Decommission section that runs south to lower road.
9058G	0.63	Decommission section that runs south to lower road.
9059H	0.88	Decommission section runs south to lower road.
9069S	1.10	Decommission north of FR9070T

Road Number	Miles	Notes
9075Y	0.55	RAU one section to access corral, decommission second section
9116X	1.51	RAU to range improvement, decommission rest of road
9119B	0.41	Decommission past stock tank
9269D	0.50	RAU to well, decommission rest of road
9711A	1.24	Decommission north of quarry access.
9816C	2.09	Decommission between FR9900H & FR9900P
9838C	0.56	Decommission west of FR9837C
9867B	1.30	RAU up to stock tank; Decommission after stock tank
9882A	0.94	Decommission western leg Sign closed when wet on 9 road
9900P	3.37	Decommission west of fence line.